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PATENT ABSTRACTS OF JAPAN

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(71) Applicant: TOSHIBA CORP

(72) Inventor: MITSUTAKE KUNIHIKO
USHIKU YUKIHIRO

(74) Representative:

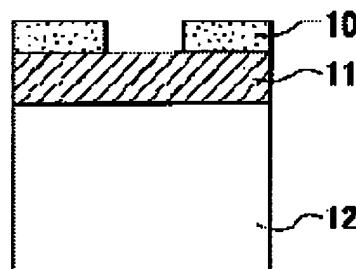
(54) METHOD FOR
MANUFACTURING
SEMICONDUCTOR DEVICE

(57) Abstract:

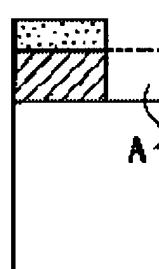
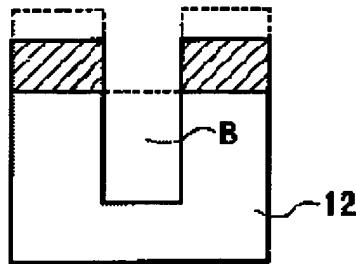
PROBLEM TO BE SOLVED: To manufacture a hollow in a substrate with satisfactory controllability.

SOLUTION: This method comprises a thin film accumulating step for accumulating a thin film on a semiconductor substrate (a), a thin film opening step for forming an opening at the thin film, by removing one part of the thin film and exposing the semiconductor substrate (b), a groove forming step for forming a groove having an opening which is not larger than the opening at the semiconductor substrate by removing one part of the exposed semiconductor substrate (d), and a heat treatment step for carrying out heat treatment to the groove and closing the opening of the groove (e).

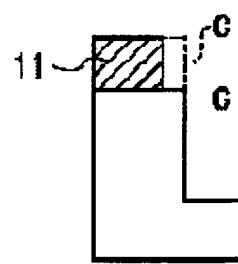
(a) 開孔前



(b) 溝開口

(c) 反応性イオンエッチャリング
およびレジスト除去

(d) 溝開口

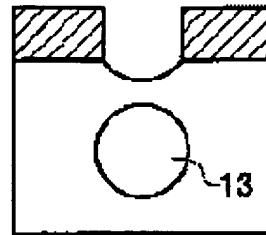


(e) 热处理

(f) 溝開口

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10: レジスト膜
11: 基板
13: 空洞

12: 空洞
13: 空洞